

In the Claims:

1. (Cancel)

2. (Previously Amended) A prism assembly, comprising:

a set of optics configured to break an input light beam into at least a first component light beam and a second component color light beam;

a first quarter waveplate inserted in the first component light beam and oriented such a principle axis of the first quarter waveplate is aligned parallel to an axis of linear polarization of the first component light beam; and

a second quarter waveplate inserted in the second component light beam and oriented such a principle axis of the second quarter waveplate is aligned perpendicular to an axis of linear polarization of the second component light beam.

3. (Previously Amended) The prism assembly according to Claim 2, wherein:

the set of optics is further configured to break the input light beam further into at least a third component color light beam; and

the prism assembly further comprising a third quarter waveplate inserted in the second component light beam and oriented such a principle axis of the second quarter waveplate is aligned parallel to an axis of linear polarization of the second component light beam.

4. (Previously Amended) The prism assembly according to Claim 3, further comprising:

a set of modulation devices each respectively inserted into a corresponding one of the component color light beams and each modulation device configured to modulate its respective corresponding component light beam;

wherein the color component light beams having parallel quarter waveplates are reflected N times after modulation and the color component light beams having perpendicular quarter waveplates are reflected M times after modulation.

5. (Previously Amended) The prism assembly according to Claim 3, further comprising:

a set of modulation devices each respectively inserted into a corresponding one of the component color light beams and each modulation device configured to modulate its respective corresponding component light beam;

wherein the color component light beams having parallel quarter waveplates are reflected after modulation and the color component light beams having perpendicular quarter waveplates are not reflected after modulation.

6. (Previously Amended) The prism assembly according to Claim 3, further comprising:

a set of modulation devices each respectively inserted into a corresponding one of the component color light beams and each modulation device configured to modulate its respective corresponding component light beam;

wherein the color component light beams having perpendicular quarter waveplates are reflected after modulation and the color component light beams having parallel quarter waveplates are reflected after modulation.

7. – 13 (Cancel)

14 – 25 (Cancelled)

26. (Cancel)

27 – 30 (Cancelled)

31. (Original) A prism assembly, comprising:

at least 3 light channels;

a set of parallel waveplates and at least one perpendicular waveplate, each parallel and perpendicular waveplate individually positioned in a respective one of the light channels;

the parallel waveplates oriented so as to have a principle axis oriented parallel to an axis of linearly polarized light input to the parallel waveplates and the perpendicular waveplate is oriented with its principle axis perpendicular to an axis of linearly polarized light input to the perpendicular waveplate; and

at least 3 microdisplays attached to the prism assembly, each individually positioned in a respective one of the light channels and an axis of each microdisplay is parallel to an axis of polarized light input to the quarter waveplate of the same channel.

32 – 37 (Cancelled)

38 – 48 (Cancel)

49. (Previously Presented) The microdisplay package according to Claim 7, wherein the microdisplay is a reflective Liquid Crystal On Silicon (LCOS) microdisplay.

50. (Previously Presented) The microdisplay package according to Claim 7, wherein the light channel is part of a Liquid Crystal On Silicon (LCOS) video projection system utilizing LCOS microdisplays.

51. (Previously Presented) The microdisplay package according to Claim 7, wherein the light channel of a multi light channel kernel wherein at least one

other light channel utilizes an essentially identical technique for skew ray and residual retardation compensation in each channel.

52. (Previously Presented) The microdisplay package according to Claim 51, wherein the only differences in technique for compensation in each channel comprises one of a predominate wavelength of light in each channel and physical layout of each channel.

53. (Previously Presented) The microdisplay package according to Claim 52, wherein the light channels are produced via a quad style kernel comprising 4 beam splitters arranged in a liquid coupled quad configuration.

54. (Previously Presented) The microdisplay package according to Claim 53, wherein the quad style kernel is operative to produce red, green, and blue light channels each modulated by a similar microdisplay package.

55. (Previously Presented) The microdisplay package according to Claim 52, wherein the microdisplay package is part of a LCOS Video projection system.

56. (Previously Presented) The microdisplay package according to Claim 7, wherein the microdisplay package is part of a LCOS Video projection system.

57. (New) A prism assembly, comprising:

- a microdisplay comprising a modulating face, an optical axis, and a mechanical axis;
- a set of optics configured to direct a light beam comprising an axis of polarization to the modulating face of the microdisplay;
- a quarter waveplate comprising an optical axis disposed between the microdisplay and set of optics;

wherein:

the optical axis of the quarter waveplate is aligned parallel to the axis of polarization of the light beam;

the axis of the microdisplay is oriented at a non-zero angle θ_0 relative to the optical axis of the quarter waveplate such that maximum compensation for residual retardation of the microdisplay; and

the optical axis of the quarter waveplates is offset from parallel and perpendicular relative to side edges of the quarter waveplate.

58. (New) An optical apparatus comprising:

a microdisplay comprising an optical face, a microdisplay optical axis, and a mechanical axis, wherein

the mechanical axis is not precisely aligned to the optical axis; and
a quarter waveplate;

wherein:

the quarter waveplate is in optical series with the microdisplay;

the quarter waveplate optical axis is parallel to the microdisplay optical axis; and

the optical axis of the quarter waveplate is offset from either of parallel and perpendicular relative to side edges of the quarter waveplate.

59. (New) The optical apparatus according to Claim 59, wherein the microdisplay and quarter waveplate are disposed in a package.

60. (New) The optical apparatus according to Claim 59, wherein the microdisplay comprises a reflective microdisplay.

61. (New) The optical apparatus according to Claim 59, wherein the microdisplay comprises a Liquid Crystal on Silicon (LCoS) microdisplay.

62. (New) The optical apparatus according to Claim 59, wherein the microdisplay comprises a light modulator in a multi-light channel video projection system.

63. (New) The optical apparatus according to Claim 59, wherein the microdisplay is configured to modulate a first sight channel in a multi-channel video projection system.

64. (New) The optical apparatus according to Claim 59, wherein the microdisplay is configured to modulate light in a multi-color video projection system.

65. (New) The optical apparatus according to Claim 64, wherein the multi-color video projection system comprises a Liquid Crystal on Silicon (LCoS) High Definition (HD) Rear Projection Television (RPTV).

66. (New) The optical apparatus according to Claim 59, wherein the side edges of the quarter waveplate are parallel to side edges of the microdisplay.

67. (New) The optical apparatus according to Claim 58, wherein the quarter waveplate is cut such that outer dimensions of the quarter waveplate cover an optical face of the microdisplay.

68. (New) The optical apparatus according to Claim 58, wherein the quarter waveplate is cut such that outer dimensions of the quarter waveplate are congruent with an optical face of the microdisplay.

69. (New) The optical apparatus according to Claim 58, wherein the quarter waveplate is cut such that outer dimensions of the quarter waveplate is proportional to dimensions of an optical face of the microdisplay.

70. (New) The optical apparatus according to Claim 58, wherein the quarter waveplate is constructed from higher order waveplates.

71. (New) The method according to Claim 26, wherein the microdisplays comprise reflective Liquid Crystal On Silicon (LCOS) microdisplays.

72. (New) The method according to Claim 26, wherein at least one of the waveplates is a compensated higher order waveplate.

73. (New) The method according to Claim 36, wherein the light channel's are light channels of a Liquid Crystal On Silicon (LCOS) video projection system.